

10/570,018

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	996	(556/136).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/03/29 18:46
L2	2132	(502/152).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/03/29 19:11
L3	1436	(502/155).CCLS.	US-PGPUB; USPAT; EPO; JPO	OR	OFF	2007/03/29 19:11

10/570,018

(FILE 'HOME' ENTERED AT 15:51:20 ON 29 MAR 2007)

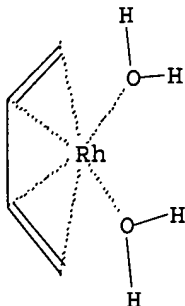
FILE 'REGISTRY' ENTERED AT 15:52:05 ON 29 MAR 2007

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 15:52:32 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 7216 TO ITERATE

27.7% PROCESSED 2000 ITERATIONS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 139228 TO 149412
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 15:52:38 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 143880 TO ITERATE

100.0% PROCESSED 143880 ITERATIONS
SEARCH TIME: 00.00.01

28 ANSWERS

L3 28 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
172.10	172.31

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 15:52:43 ON 29 MAR 2007

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FILE LAST UPDATED: 28 Mar 2007 (20070328/ED)

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=> s 13

L4 20 L3

=> d 1-20 bib abs

L4 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2006:855421 CAPLUS
DN 145:419292
TI Reactivity of [Cp*Rh(η^6 -C₆H₃NH₂-2,6-i-Pr₂)](OTf)₂ toward phosphines and alkynes
AU Lim, Mi S.; Baeg, Ji Young; Lee, Soon W.
CS Department of Chemistry (BK21), Institute of Basic Science, Sungkyunkwan University, Suwon, 440-746, S. Korea
SO Journal of Organometallic Chemistry (2006), 691(19), 4100-4108
CODEN: JORCAI; ISSN: 0022-328X
PB Elsevier Ltd.
DT Journal
LA English
OS CASREACT 145:419292
AB The cationic aniline complex [Cp*Rh(η^6 -2,6-(Me₂CH)₂C₆H₃NH₂)](OTf)₂ (1) was prepared from either [Cp*Rh(η^2 -NO₃)(η^1 -OTf)] or [Cp*Rh(OH₂)₃](OTf)₂ and 2,6-diisopropylaniline. Complex 1 underwent substitution with phosphines or phosphites, indicating the labile character of the η^6 -aniline ligand. Complex 1 mediated cycloaddn. reactions of several alkynes in refluxing ethanol: the [2 + 2] dimerization for Ph-C.tplbond.C-Ph and the [2 + 2 + 1] trimerization for PhC.tplbond.CH and p-CH₃C₆H₄C.tplbond.CH. The unexpected cyclobutadiene complex [Cp*Rh(η^4 -C₄(C(O)CH₃)₂H(SiMe₃))] was obtained from complex 1 and Me₃SiC.tplbond.C-C.tplbond.CSiMe₃ and structurally characterized by x-ray diffraction.
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:373102 CAPLUS
DN 143:275996
TI Crystal structures of organometallic aqua complexes [Cp*RhIII(bpy)(OH₂)]²⁺ and [Cp*RhIII(6,6'-Me₂bpy)(OH₂)]²⁺ used as key catalysts in regioselective reduction of NAD⁺ analogues
AU Ogo, Seiji; Hayashi, Hideki; Uehara, Keiji; Fukuzumi, Shunichi
CS Department of Material and Life Science, Graduate School of Engineering, Presto & Crest, Osaka University, Osaka, 565-0871, Japan
SO Applied Organometallic Chemistry (2005), 19(5), 639-643
CODEN: AOCHEX; ISSN: 0268-2605
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Crystal structures of organometallic aqua complexes [Cp*RhIII(bpy)(OH₂)]²⁺ (1, Cp* = η^5 -C₅Me₅, bpy = 2,2'-bipyridine) and [Cp*RhIII(6,6'-Me₂bpy)(OH₂)]²⁺ (2, 6,6'-Me₂bpy = 6,6'-dimethyl-2,2'-bipyridine) used as

key catalysts in regioselective reduction of NAD⁺ analogs were determined by x-ray anal. The yellow crystals of 1(PF₆)₂ and orange crystals of 2(CF₃SO₃)₂ used in the x-ray anal. were obtained from aqueous solns. Crystals of 1(PF₆)₂ are monoclinic, space group P2₁/c, and crystals of 2(CF₃SO₃)₂ are monoclinic, space group P2₁/n. The Rh-Oaqua length of 2.194(4) Å obtained for 1(PF₆)₂ is significantly different from that of 2.157(3) Å obtained for the previously reported disorder model [Cp*RhIII(bpy)(0.7H₂O/0.3MeOH)](CF₃SO₃)₂·0.7H₂O in which the coordinated H₂O is replaced by a coordinated MeOH. The five-membered ring involving the Rh atom and the 6,6'-Me₂bpy chelating unit in 2(CF₃SO₃)₂ is not flat, whereas the five-membered chelate ring in 1(PF₆)₂ is nearly flat. Such a nonplanar structure in 2(CF₃SO₃)₂ is ascribed to the steric repulsion between the 6,6'-Me₂bpy ligand and the Cp* ligand.

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:837023 CAPLUS
DN 142:38364
TI Azido- or hydroxyl-capped half-cubanes containing Cp*Rh fragments:
[Cp*₃Rh₃(μ-X)₃(μ₃-X)]₂⁺ (X = OH- or N₃-)
AU Han, Won Seok; Lee, Soon W.
CS Department of Chemistry (BK21), Institute of Basic Science, Sungkyunkwan University, Suwon, 440-746, S. Korea
SO Dalton Transactions (2004), (20), 3360-3364
CODEN: DTARAF; ISSN: 1477-9226
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 142:38364
AB Trinuclear half-sandwich rhodium cubane-shaped ligand-bridged complexes were prepared and characterized. Treatment of [Cp*Rh(H₂O)₃](OTf)₂ (1) with Me₃SiNHCMe₃ in acetone gave a hydroxyl-capped half-cubane [Cp*₃Rh₃(μ-OH)₃(μ₃-OH)](OTf)₃(Me₃CNH₃) (2). Slow diffusion of Me₃SiN₃ in di-Et ether into compound 1 in acetone produced an azido-capped half-cubane [Cp*₃Rh₃(μ-N₃)₃(μ₃-N₃)](OTf)₂ (3). On the other hand, treating 1 with Me₃SiN₃ in acetone gave an azido-bridged, dinuclear rhodium(III) complex [Cp*Rh(μ-N₃)(OH₂)]₂(OTf)₂ (4). Complexes 2 and 3 represent the first azido- or hydroxyl-capped, incomplete cubane-type Rh clusters. Under appropriate conditions, complexes 2 and 3 could be converted to complex 4. The structures of all products were determined by x-ray diffraction.

RE.CNT 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:373424 CAPLUS
DN 141:123740
TI Various forms of linear dipyridyls in discrete rectangles, dinuclear rods, and one-dimensional networks containing (η⁵-pentamethylcyclopentadienyl)rhodium(III)
AU Seok Han, Won; Lee, Soon W.
CS Department of Chemistry (BK21), Institute of Basic Science, Sungkyunkwan University, Suwon, 440-746, S. Korea
SO Dalton Transactions (2004), (10), 1656-1663
CODEN: DTARAF; ISSN: 1477-9226
PB Royal Society of Chemistry
DT Journal
LA English
OS CASREACT 141:123740
AB [Cp*Rh(η¹-NO₃)(η²-NO₃)] (1) reacted with pyrazine (pyz) to give dinuclear [Cp*Rh(η¹-NO₃)(μ-pyz)0.5]₂·CH₂Cl₂ (3·CH₂Cl₂). Tetranuclear rectangles [Cp*Rh(η¹,μ-X)(μ-

L)0.5]4(OTf)4 (4a: X = N3, L = bpy; 4b: X = N3, L = bpe; 4c: X = NCO, L = bpy) were prepared from [Cp*Rh(H2O)3](OTf)2 (2), a pseudo-halide (Me3SiN3 or Me3SiNCO), and a linear dipyridyl {4,4'-bipyridine (bpy) or trans-1,2-bis(4-pyridyl)ethylene (bpe)} by self-assembly through 1-pot synthesis at room temperature. Treating complex 2 with NH4SCN and dipyridyl

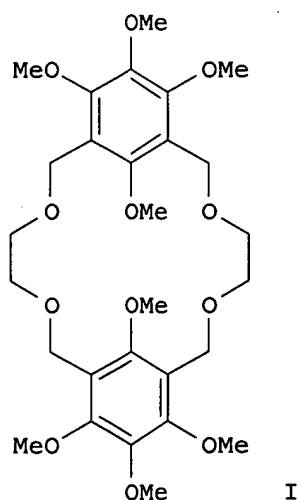
gave

dinuclear rods, (LH2)[Cp*Rh(η1-SCN)3]2 (5a: L = bpy; 5b: L = bpe), in which two Cp*Rh(η1-SCN)3 units are connected by the diprotonated dipyridyl (LH22+) through N+-H...N H bonds.

Reactions of complex 2 with 1-(trimethylsilyl)imidazole (TMSIm) and dipyridyl (bpy or bpe) also produced another family of dinuclear rods [Cp*Rh(ImH)3]2·L (6a: L = bpy; 6b: L = bpe). Treating 1 and 2 with TMSIm and NH4SCN (in the absence of dipyridyl) generated a 1-dimensional chain [Cp*Rh(ImH)3](NO3)2 (7) and a 1-dimensional helix [Cp*Rh(η1-SCN)2(η1-SHCN)]·H2O (8·H2O), resp. The structures of complexes 3·CH2Cl2, 4a·H2O, 4c·2H2O, 5b, 6a, 7 and 8·H2O were determined by x-ray diffraction.

RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2003:461305 CAPLUS
DN 139:364914
TI Synthesis, NMR and properties of a novel crown ether dimer. X-ray molecular structure of bis(2,5-dimethoxy-4,6-dimethyl-1,3-xylyl)-18-crown-4
AU Amouri, Hani; Besace, Yvon; Vaissermann, Jacqueline
CS Laboratoire de Chimie Inorganique et Materiaux Moleculaires, UMR 7071-CNRS, Universite Pierre-et-Marie-Curie, Paris, 75252, Fr.
SO Comptes Rendus Chimie (2003), 6(2), 193-197
CODEN: CRCOCR; ISSN: 1631-0748
PB Editions Scientifiques et Medicales Elsevier
DT Journal
LA English
OS CASREACT 139:364914
GI



AB The synthesis and complete characterization of the precursor 3,5-di(hydroxyethyloxymethyl)-2,6-dimethylhydroquinone-dimethylether and that of the crown ether I are reported. Further the X-ray structure of

this novel crown ether I is included, which provide us with valuable information about its solid-state structure [orthorhombic, Pbca, a 10.552(1), b 11.839(3), c 21.790(3)Å, α 90, β 90, γ 90°, V 2722.1(8) Å³, Z 4]. The title mol. I lies about a center of symmetry. Thus the novel 18-membered macrocycle I has a sym. configuration. Interestingly, a side view of the mol. shows that the two methoxy groups on each ring are on the same side, face to face and bend over the two arene units in the macrocycle. Finally, preliminary studies of its complexing property towards rhodium cations are presented and discussed.

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:838969 CAPLUS
DN 138:195689
TI Excited state properties of aqueous (2'-deoxyadenosinato)-(pentamethylcyclopentadienyl)rhodium(III) cyclic trimer.
AU Kunkely, Horst; Vogler, Arnd
CS Institut fur Anorganische Chemie, Universitat Regensburg, Regensburg, D-93040, Germany
SO Inorganica Chimica Acta (2002), 338, 265-267
CODEN: ICHAA3; ISSN: 0020-1693
PB Elsevier Science B.V.
DT Journal
LA English
AB The cyclic trimer [(C5Me5)RhIII(doa)]₃³⁺ with doa = 2'-deoxyadenosinate is characterized by a low-energy ligand field (LF) excited state which is emissive (λ_{max} = 580 nm) and reactive. The irradiation of the complex in water leads to a photoaquation with the formation of [(C5Me5)RhIII(H₂O)₃]₂²⁺ and doaH.

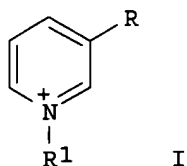
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:716518 CAPLUS
DN 137:228603
TI NAD(P) mimic for use in enzymic redox reactions
IN Fish, Richard H.; Kerr, John B.; Lo, Christine H.
PA The Regents of the University of California, USA
SO PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002072869	A2	20020919	WO 2002-US7444	20020311
	WO 2002072869	A3	20030227		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2003022266	A1	20030130	US 2001-805726	20010312
	US 6716596	B2	20040406		
	EP 1373552	A2	20040102	EP 2002-725121	20020311
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
	JP 2004527509	T	20040909	JP 2002-571919	20020311

	US 2004235084	A1	20041125	US 2003-729627	20031206
PRAI	US 2001-805726	A	20010312		
	WO 2002-US7444	W	20020311		
OS	CASREACT 137:228603; MARPAT 137:228603				
GI					



AB Novel agents acting as co-factors for replacement of NAD(P)⁺/NAD(P)H co-enzyme systems in enzymic redox reactions are disclosed. A composition for replacement or regeneration of an NAD(P)⁺/NAD(P)H system in redox processes comprising (a) a polymer matrix, (b) a catalyst precursor, (3) a cofactor, and (d) an enzyme is further disclosed. The NAD(P) mimics are I [R = CN, CONH₂, CONHMe, CSNH₂, COCH₃, COOMe; R₁ = CH₂(CH₂O)_nYR₂, ribose-YR₂, or (X substituted)benzyl; Y = OP(:O)O, OBO₂, OSO₂, NHMe, (CH₂)_nNH, adenine, imidazole; R₂ = H, Me, (OCH₂CH₂)_n, (NCH₂CH₂)_n, [N:P(OMe)₂]_n; X = OMe, CF₃, (OCH₂CH₂)_n, OP(:O)OR₃; R₃ = H, Me, (OCH₂CH₂)_n, (NCH₂CH₂)_n, [N:P(OMe)₂]_n; n = 1-2000] and salts thereof. Thus, I with R₁ = benzyl and R = various substituents such as CONH₂ as well as I with R₁ = ribose 5'-methylphosphate and R = CONH₂ were synthesized and studied. Both of these coAlc. dehydrogenase enzyme mimics were used by horse liver alc. dehydrogenase to reduce phenethylmethylketone to the corresponding alc. with >93% ee (S-enantiomer). The reduced mimics were produced in this reaction using [Cp*Rh(bpy)(H₂O)](OTf)₂ as a catalyst precursor and sodium formate as hydride source.

L4 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2001:817431 CAPLUS
 DN 136:98327

TI Bioorganometallic Chemistry. 13. Regioselective Reduction of NAD⁺ Models, 1-Benzylnicotinamide Triflate and β-Nicotinamide Ribose-5'-methyl Phosphate, with in Situ Generated [CpRh(Bpy)H]⁺: Structure-Activity Relationships, Kinetics, and Mechanistic Aspects in the Formation of the 1,4-NADH Derivatives

AU Lo, H. Christine; Leiva, Carmen; Buriez, Olivier; Kerr, John B.; Olmstead, Marilyn M.; Fish, Richard H.

CS Lawrence Berkeley National Laboratory, University of California, Berkeley, CA, 94720, USA

SO Inorganic Chemistry (2001), 40(26), 6705-6716
 CODEN: INOCAJ; ISSN: 0020-1669

PB American Chemical Society

DT Journal

LA English

OS CASREACT 136:98327

AB Cofactor regeneration; i.e., regiospecific conversion of NAD⁺ to 1,4-NADH, has been extensively studied and is a crucial component in the eventual use of 1,4-NADH in a variety of bioorg. synthesis processes involving the formation of chiral organic compds. We have studied the reduction of a model NAD⁺ compound, 1-benzylnicotinamide triflate, 1a, using [Cp*Rh(bpy)(H₂O)]²⁺, 2 (Cp* = η⁵-C₅Me₅, bpy = 2,2'-bipyridyl), as the catalyst precursor and sodium formate (HCO₂Na) as the hydride source in 1:1 H₂O/THF and have found exclusive 1-benzyl-1,4-dihydronicotinamide regioselectivity, as was observed previously for natural NAD⁺ that provided 1,4-NADH. Moreover, a variety of 3-substituted derivs. of 1-benzylpyridinium triflate, in addition

to the -C(O)NH₂ group (1a), were also studied to ascertain that this 3-functionality (e.g., -C(O)NHCH₃, -C(S)NH₂, -C(O)CH₃, -C(O)OCH₃, and -CN, 1b,d-g) coordinates to a [Cp*Rh(bpy)H]⁺ complex to direct the concerted, regioselective transfer of the hydride group from the rhodium to the 4-ring position of the NAD⁺ model; all coordinating 3-substituents had relative rates in the 0.9-1.3 range with substrate 1a set to 1.0. If in fact the 3-substituent presented a steric effect [-C(O)NH(CH₂CH₃)₂, 1c] or was a nonbinding group (-CH₃, 1h; -H, 1i), no catalytic hydride transfer was observed even with the more electrophilic 2 and 6 ring positions being readily available, which further implicated the crucial coordination of the NAD⁺ model to the Cp*Rh metal ion center. We also found that the 1-benzyl substituent on the nitrogen atom exerted a substantial electron-withdrawing effect, in comparison to the electron-donating 1-Me substituent, and favorably affected the rate of the regioselective reduction (rate enhancement of 1-benzyl/1-Me = 2.0). The kinetics of the regioselective reduction of 1a were studied to show that the initial rate of reduction, *r_i*, is affected by the concns. of the substrate, 1a, precatalyst, 2, and the hydride source, HCO₂Na, in 1:1 H₂O/THF: $d[1\text{-benzyl-1,4-dihydronicotinamide}]/dt = k_{cat}[1a][2][HCO_2Na]$. Furthermore, we wish to demonstrate that a previously synthesized aqueous NAD⁺ model, β-nicotinamide ribose-5'-Me phosphate, 3, shows a similar regioselectivity for the 1,4-NADH analog, while the initial rate (*r_i*) for the regioselective reduction of 3 and NAD⁺ itself was found to be comparable in water but faster by a factor of .apprx.3 in comparison to 1a in 1:1 H₂O/THF; the solvent, THF, appeared to inhibit the rate of reduction in 1a by presumably competing with the substrate 1a for the Cp*Rh metal ion center. However, in H₂O, the initial kinetic rate for substrate 3 was not affected by its concentration and implies that, in H₂O, [Cp*Rh(bpy)H]⁺ formation is rate determining. We assume that binding of 3 and NAD⁺ to the Cp*Rh metal ion center is also a pertinent step for 1,4-dihydro product formation, the exptl. rate expression in H₂O being $d[1,4\text{-dihydro-}\beta\text{-nicotinamide ribose-5'-Me phosphate}]/dt = k_{cat}[2][HCO_2Na]$. What we have discovered, for the first time, is evidence that the regioselective reduction of NAD⁺ to 1,4-NADH by [Cp*Rh(bpy)H]⁺ is a consequence of the amide's ability to coordinate to the Cp*Rh metal center, thereby constricting the kinetically favorable six-membered ring transition state for plausible concerted hydride transfer/insertion to C₄ to regioselectively provide the 1,4-NADH derivative; [Cp*Rh(bpy)H]⁺ can be categorized as a biomimetic enzymic hydride via its ability to bind and regioselectively transfer hydride to C₄, exclusively. Clearly, the pyrophosphate and adenosine groups associated with the structure of NAD⁺ are not essential in the rate of hydride transfer to C₄, with NAD⁺ model 3 having a similar initial rate (*r_i*) of reduction as NAD⁺ itself in water. Finally, a catalytic cycle will be proposed to account for our overall observations.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
AN 1999:742293 CAPLUS
DN 132:64390
TI Bioorganometallic chemistry. Part 12. Reaction of [Cp*Rh(H₂O)₃](OTf)₂ with nicotinamide adenine dinucleotide in water: synthesis, structure, and a pH-dependent 1H-NMR and voltammetric study of the cyclic trimer product, [Cp*Rh(μ-η¹(N1):η²(N6,N7)-9-(5'-ribose pyrophosphate-5''-ribose-1''-nicotinamide))adeninato]₃(OTf)₃
AU Ogo, Seiji; Buriez, Olivier; Kerr, John B.; Fish, Richard H.
CS Lawrence Berkeley National Laboratory, University of California, Berkeley, CA, 94720, USA
SO Journal of Organometallic Chemistry (1999), 589(1), 66-74
CODEN: JORCAI; ISSN: 0022-328X
PB Elsevier Science S.A.
DT Journal
LA English
AB The reaction of [Cp*Rh(H₂O)₃](OTf)₂ with nicotine adenine dinucleotide

(NAD⁺), an important co-factor in enzymic reactions, was studied using 1H-NMR spectroscopy, electrospray ionization mass spectroscopy (ESI/MS), cyclic voltammetry (CV), and isolation techniques, as a function of pH. The product was formulated from the above-mentioned spectroscopic data as the known Cp*Rh cyclic trimer structure, [Cp*Rh(μ - η^1 (N1): η^2 (N6,N7)-9-(5'-ribose pyrophosphate-5''-ribose-1''-nicotinamide))adeninato]3(OTf)3, 3, which forms via a self-assembly mechanism as the pH is increased from 3 to 6 (1H-NMR). The authors also compared 3 with the putative one reported that formed via reaction with [(Cp*Rh)2(μ -Cl)2Cl2] and was tentatively assigned the formula, [Cp*Rh(NAD)Cl](Cl). In fact, both Cp*Rh synthons provide the same cyclic trimer product at pH 6, while a presumed mixture of [Cp*Rh(NAD)] and Cp*Rh aqua intermediates (at least eight Cp*Rh 1H-NMR signals are evident) were formed at pH 3.0. A full anal. of the CV data reveals that some Cp*Rh aqua complexes are electroactive at potentials around -1.2 V vs. Ag|AgCl, but probably not the cyclic trimer, complex 3. Unfortunately, the authors were not able to use complex 3 in an intramol., regioselective reduction reaction, with Na formate as the hydride source, to provide the corresponding biol. active 1,4-dihydro derivative

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:538977 CAPLUS

DN 131:299537

TI Mechanistic Investigation on the Water Substitution in the
 η^5 -Organometallic Complexes Cp*Ir(H₂O)₃²⁺ and Cp*Rh(H₂O)₃²⁺

AU Cayemittes, Sonia; Poth, Tilo; Fernandez, Maria J.; Lye, Peter G.; Becker, Michael; Elias, Horst; Merbach, Andre E.

CS Institut de Chimie Minerale et Analytique, Universite de Lausanne BCH,
Lausanne, CH-1015, Switz.

SO Inorganic Chemistry (1999), 38(19), 4309-4316
CODEN: INOCAJ; ISSN: 0020-1669

PB American Chemical Society

DT Journal

LA English

AB The substitution of H₂O in the half-sandwich complexes Cp*Rh(H₂O)₃²⁺ and Cp*Ir(H₂O)₃²⁺ (Cp* = η^5 -pentamethylcyclopentadienyl anion) by Cl⁻, Br⁻, I⁻, SCN⁻, py-CN (4-cyanopyridine), py-nia (nicotinamide), py (pyridine), TU (thiourea), and DMS (di-Me sulfide) was studied by stopped-flow spectroscopy at variable concentration, temperature, and pressure. The

proton dissociation consts. of the triaqua complexes, pK_a = 6.47 (for Rh) and pK_a = 3.86 (for Ir), as well as the equilibrium consts. for the formation of dinuclear (Cp*M)₂(μ -OH)₃⁺ were obtained by spectrophotometric titrns. The equilibrium consts. K₁ for the formation of the monosubstituted complexes Cp*M(H₂O)₂L^{+/2+}, as determined for anionic and neutral ligands L, lie in the range 10²-10⁵ M⁻¹ and follow the sequences K(Cl⁻) < K(Br⁻) < K(I⁻) and K(py-CN) < K(py-nia) < K(py) < K(TU,DMS). Assuming the Eigen-Wilkins mechanism for the formation of the monosubstituted complexes, 2nd-order rate consts. k_{f,1} were corrected for outer sphere complex formation and for statistical factors to obtain rate constant k_i' for the interchange step. The interchange rates k_i' are nearly independent of the nature of L and very close to the rate of H₂O exchange (k_{ex}(Rh) = (1.6 ± 0.3) + 10⁵ s⁻¹ and k_{ex}(Ir) = (2.5 ± 0.08) + 10⁴ s⁻¹). In all cases, i.e., for M = Rh and Ir and for L = anionic or neutral, the volume of the transition state is larger than that of the triaqua species. These findings support the operation of an I_d mechanism without excluding a D mechanism. For a given ligand L, the substitution of another H₂O mol. in the complexes Cp*M(H₂O)₂L^{+/2+} is by 1 order of magnitude slower than the substitution of the 1st H₂O mol. in the triaqua species Cp*M(H₂O)₃²⁺, as verified, for example, by k_{f,1} = 2.61 + 10³ and k_{f,2} = 3.09 + 10² M⁻¹ s⁻¹ for M = Ir and L = py.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1999:303325 CAPLUS
 DN 131:181140
 TI Bio-organometallic chemistry: synthesis, structure, and molecular recognition chemistry of (η^5 -pentamethylcyclopentadienyl)rhodium-DNA/RNA complexes in water
 AU Fish, Richard H.
 CS Lawrence Berkeley National Laboratory, University of California, Berkeley, CA, 94720, USA
 SO Coordination Chemistry Reviews (1999), 185-186, 569-584
 CODEN: CCHRAM; ISSN: 0010-8545
 PB Elsevier Science S.A.
 DT Journal; General Review
 LA English
 AB A review with 34 refs. A review of the aqueous bio-organometallic chemical of DNA/RNA nucleobases and of the co-factor, NAD, with an (η^5 -pentamethylcyclopentadienyl)rhodium aqua complex, $[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})_3](\text{OTf})_2$, at various pH values, will be presented. The unique structures of the Cp^*Rh complexes with adenine, guanine, cytosine, thymine, and NAD bioligands were determined by a combination of ^1H - and ^{31}P -NMR, ESI/MS, and single crystal x-ray crystallog. Competitive reactivity studies, principally with the more reactive adenine and guanine derivs., showed the important bonding characteristics with these nucleobases, while a novel cyclic trimer structure with 9-substituted adenine derivs. provided a new supramol. receptor for mol. recognition studies with a variety of biol. important guests.
 RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1996:181971 CAPLUS
 DN 124:289838
 TI Aqueous Organometallic Chemistry. 2. ^1H NMR Spectroscopic, Synthetic, and Structural Study of the Chemo- and Diastereoselective Reactions of $[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})_3]^{2+}$ with Nitrogen Ligands as a Function of pH
 AU Ogo, Seiji; Chen, b Hong; Olmstead, Marilyn M.; Fish, Richard H.
 CS Lawrence Berkeley National Laboratory, University of California, Berkeley, CA, 94720, USA
 SO Organometallics (1996), 15(8), 2009-13
 CODEN: ORGND7; ISSN: 0276-7333
 PB American Chemical Society
 DT Journal
 LA English
 AB The reactions of a new Cp^*Rh aqua synthon, $[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})_3]^{2+}$ (1), at acidic pH values (2-6) with aniline (2), pyridine (3), and L-phenylalanine (4) have provided interesting chemo- and diastereoselectivities as studied by ^1H NMR, FAB/MS, and single-crystal x-ray crystallog. The reaction of 2 and aqua complex 1, at pH values from 4 to 6, quant. provided $[\text{Cp}^*\text{Rh}(\eta^6\text{-aniline})]^{2+}$ (5); the structure of 5 was unequivocally determined by a single-crystal x-ray anal., which also showed an approx. 25% η^5 component. Compound 3 reacted with 1, at pH 2-6, to selectively provide $[\text{Cp}^*\text{Rh}(\eta^1\text{-pyridine})_n(\text{H}_2\text{O})_{3-n}]^{2+}$ ($n = 1-3$) complexes 6a-c as a function of pH. Surprisingly, complex 1 reacted with 4, from pH 4 to 6, to provide only one diastereomer of the known cyclic trimer $[(\text{Cp}^*\text{Rh})(\mu\text{-}\eta^1\text{-(OCO)}:\eta^2\text{-(N,OCO)}\text{-L-phenylalanine})]^{3+}$ (7; SC,SC,SC,SRh,SRh,SRh), an example of a one-step, highly diastereoselective reaction in H_2O .

L4 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1995:805163 CAPLUS
 DN 124:29993
 TI Organometallic aqua complexes. Part 3. Olefin aqua complexes of rhodium(I)
 AU Koelle, Ulrich; Goerissen, Ralf; Wagner, Trixie

CS Inst. Inorganic Chem., Aachen Technical Univ., Aachen, D-52074, Germany
SO Chemische Berichte (1995), 128(9), 911-17
CODEN: CHBEAM; ISSN: 0009-2940
PB VCH
DT Journal
LA English
OS CASREACT 124:29993
AB Dehalogenation of halide precursors [(olefin)RhCl]₂ [olefin = ethylene, 1,5-cyclooctadiene (COD), norbornadiene (NBD), 2,3-dimethylbutadiene (DMB)] in water gave the corresponding cis-diolefin aqua ions. Attempted isolation of [(COD)Rh(H₂O)₂]OTs yielded crystals of (COD)Rh(H₂O)(η^1 -OTs), the structure of which was determined by x-ray crystallog. (space group P1, Z = 2, R_w = 0.030). [(NBD)Rh(H₂O)₂]SbF₆ formed in solution upon dehalogenation of [(NBD)RhCl]₂ with AgSbF₆ in aqueous acetone, and decomposed upon attempted isolation into [(NBD)Rh(η^6 -toluene)]SbF₆ 10 and [(NBD)₂Rh]SbF₆ 11 in the presence of adventitious toluene. The crystal structures of 10 (space group P2₁/n, Z = 8, R_w = 0.065) and 11 (space group C2/c, Z = 4, R_w = 0.049) were determined. C₂H₄ exchange in [(C₂H₄)₂Rh(H₂O)₂]⁺ is fast with k₂ .apprx. 10⁴-10⁵ s⁻¹·M⁻¹. The rate constant for water exchange in [(COD)Rh(H₂O)₂]⁺ was estimated as 10⁴ s⁻¹ (Δ G₁₇₃.thermod. \approx 25 kJ/mol) at 173 K.

L4 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:751140 CAPLUS

DN 123:274256

TI Bioorganometallic Chemistry. 7. A Novel, Linear, Two-Coordinate Rh(I) Anionic Amide Complex Formed by the Reaction of the Nucleobase, 1-Methylthymine, with the [(Cp*Rh)₂(μ -OH)₃]⁺ Cation at pH 10: Molecular Recognition and Electrostatic Interaction within an Organometallic Hydrophobic Cavity

AU Chen, Hong; Olmstead, Marilyn M.; Maestre, Marcos F.; Fish, Richard H.

CS Lawrence Berkeley National Laboratory, University of California, Berkeley, CA, 94720, USA

SO Journal of the American Chemical Society (1995), 117(35), 9097-8

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB [Cp*Rh(H₂O)₃](OTf)₂ (Cp* = pentamethylcyclopentadienyl) reacted with 1-methylthymine (HL) to give a linear [LRhL]- adduct with [(Cp*Rh)₂(μ -OH)₃]⁺. Crystal structure data are given for the adduct as a hydroxide salt hydrate. The mechanism for the reaction is discussed in terms of mol. recognition.

L4 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:578828 CAPLUS

DN 123:112355

TI Aqueous Organometallic Chemistry: Structure and Dynamics in the Formation of (η^5 -Pentamethylcyclopentadienyl)rhodium Aqua Complexes as a Function of pH

AU Eisen, Moris S.; Haskel, Ariel; Chen, Hong; Olmstead, Marilyn M.; Smith, David P.; Maestre, Marcos F.; Fish, Richard H.

CS Lawrence Berkeley Laboratory, University of California, Berkeley, CA, 94720, USA

SO Organometallics (1995), 14(6), 2806-12

CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

AB The structures of the (η^5 -pentamethylcyclopentadienyl)rhodium aqua complexes, as a function of pH, were studied by ¹H, ¹³C, ¹⁷O, and 2-dimensional NOESY NMR spectroscopic techniques as well as by FAB mass spectrometry and potentiometric titration. The starting complex for the authors' NMR expts., [Cp*Rh(H₂O)₃](OTf)₂, 1, was structurally

characterized by single-crystal x-ray crystallog. [130 K , Mo K α radiation, $\lambda = 0.71073\text{ \AA}$, $a\ 23.979(9)$, $b\ 9.726(4)$, $c\ 18.257(6)$ \AA , $Z = 8$, orthorhombic, space group Pna2 $_1$, 3879 independent reflections, $R = 0.0482$, $R_w = 0.1062$]. Both ^1H and ^{13}C NMR titration expts. of the starting complex, 1, were performed by dissolving 1 in H_2O (D_2O) and obtaining spectra from pH 2-14. From pH 2-5 only one Cp^* signal (^1H NMR, 1.57 ppm; ^{13}C NMR, 5.78 ppm) was observed, which was attributed to 1. As the pH of the solution with 1 was increased from 5 to 7, a dynamic and rapid equilibrium provides putative $[\text{Cp}^*\text{Rh}(\mu\text{-OH})(\text{H}_2\text{O})]_2(\text{OTf})_2$, 2, and $[(\text{Cp}^*\text{Rh})_2(\mu\text{-OH})_3](\text{OTf}/\text{OH})$, 3; unfortunately, only one ^1H or ^{13}C NMR signal for Cp^*Rh at 1.50 (Cp^*) or 5.41 ppm (C-Me), resp., was found for the latter two species, with broadening of the signals at pH 5.5-6, indicating that conversion from putative 2 to 3 was very fast on the NMR time scale. As the pH was further increased from 7 to 10, only the ^1H or ^{13}C NMR signal for 3 was observed at 1.50 or 5.41 ppm, resp. Starting the equilibrium from 3 (3 .dblharw. 1 via putative 2) within the pH range 14-2 provided similar results. The 2-dimensional NOESY NMR exchange phasing expts. at pH 5.8 and 11 showed correlations between the Cp^*Me groups and the H_2O or $\mu\text{-OH}$ groups attached to Rh and between both Cp^*Me groups of the Cp^*Rh aqua complexes, although sep. signals for bulk H_2O and $\mu\text{-OH}$ or H_2O ligands bonded to Rh were not observed due to a rapid exchange process. A potentiometric titration study gave further evidence that the conversion of 1 \rightarrow 3 via putative 2 occurs rapidly with only one pKa of 5.3 being observed, reaffirming the fact that the conversion of 1 \rightarrow 3 via putative 2 was extremely fast. The pseudo-first-order rate of conversion of 1 \rightarrow 3 at pH 5.8 was measured by an NMR spin population transfer technique to be $k_1 = 7.18\text{ s}^{-1}$ (1, 0.034M; $T_1 = 1.6\text{ s}$), while k_{-1} , 3 \rightarrow 1, is 2.93 s^{-1} ($T_1 = 1.5\text{ s}$). The equilibrium constant, K_e . ^{17}O NMR studies again showed that H_2O mols. bonded to Cp^*Rh and those in the bulk solution are in very fast exchange ($k > 8150\text{ s}^{-1}$).

- L4 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1995:491693 CAPLUS
 DN 123:83668
 TI Intrazeolite organometallics. Pentamethylcyclopentadienyl rhodium complexes
 AU Balkus, Kenneth J., Jr.; Nowinska, Krystyna
 CS Dep. Chem., univ. Texas Dallas, Richardson, TX, 75083-0688, USA
 SO Microporous Materials (1995), 3(6), 665-86
 CODEN: MCMTEV; ISSN: 0927-6513
 PB Elsevier
 DT Journal
 LA English
 AB The incorporation of Cp^* [$\text{Cp}^* = \eta^5\text{-Me}_5\text{C}_5$] complexes of Rh in Y-type zeolites was studied. The preparation and characterization of intrazeolite complexes derived from $(\text{Cp}^*\text{RhCl})_2(\mu\text{-Cl})_2$ (1) and $\text{Cp}^*\text{Rh}(\text{S})_{32+}$ (3) ($\text{S} = \text{H}_2\text{O}$ and CH_2Cl_2) are described. The reactivity of the Rh complexes with CO was followed by IR spectroscopy. The nature of the CO adducts is dependent on the type of charge-balancing cation. Intrazeolite complexes were characterized in H^+ , Li^+ , Na^+ and Cs^+ partially exchanged forms of zeolite Y. Addnl., the reaction of free Cp^* ligand with intrazeolite $\text{Rh}(\text{I})$ dicarbonyl species is described.
- L4 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1995:267241 CAPLUS
 DN 122:81590
 TI π -Arene Aqua Complexes of Cobalt, Rhodium, Iridium, and Ruthenium: Preparation, Structure, and Kinetics of Water Exchange and Water Substitution
 AU Dadci, Lynda; Elias, Horst; Frey, Urban; Hoernig, Andreas; Koelle, Ulrich; Merbach, Andre E.; Paulus, Helmut; Schneider, Jens Stefan
 CS Eduard-Zintl-Institut fuer Anorganische Chemie, Technische Hochschule Darmstadt, Darmstadt, D-64289, Germany
 SO Inorganic Chemistry (1995), 34(1), 306-15

AB The half-sandwich complexes $[\text{Cp}^*\text{Co}(\text{bpy})(\text{H}_2\text{O})](\text{PF}_6)_2$, $[\text{Cp}^*\text{M}(\text{bpy})\text{Cl}]\text{Cl}$ ($\text{M} = \text{Rh}, \text{Ir}$), $[\text{L}_2\text{-4Ru}(\text{bpy})\text{Cl}]\text{Cl}$, and $[\text{Cp}^*\text{Ir}(\text{OH})_3\text{IrCp}^*]\text{OH}\cdot 11\text{H}_2\text{O}$ were prepared and characterized ($\text{Cp}^* = \text{L}_1 = \eta^5\text{-pentamethylcyclopentadienyl}$ anion; $\text{bpy} = 2,2'\text{-bipyridine}$; $\text{L}_2 = \eta^6\text{-benzene}$; $\text{L}_3 = \eta^6\text{-cymene}$; $\text{L}_4 = \eta^6\text{-hexamethylbenzene}$). X-ray structure analyses of $[\text{Cp}^*\text{Rh}(\text{bpy})\text{Cl}]\text{ClO}_4$ ($=\text{C}_2\text{O}_5\text{H}_2\text{Cl}_2\text{N}_2\text{O}_4\text{Rh}$; orthorhombic, $\text{Pmn}2_1$; $a = 12.720(5)$, $b = 8.141(5)$, $c = 10.504(5)$ Å; $Z = 2$; $R_w = 0.0352$), $[\text{Cp}^*\text{Ir}(\text{bpy})\text{Cl}]\text{ClO}_4$ ($=\text{C}_2\text{O}_5\text{H}_2\text{Cl}_2\text{IrN}_2\text{O}_4$; orthorhombic, $\text{Pmn}2_1$; $a = 12.714(4)$, $b = 8.216(4)$, $c = 10.507(4)$ Å; $Z = 2$; $R_w = 0.0235$), and $[\text{Cp}^*\text{Ir}(\text{OH})_3\text{IrCp}^*]\text{OH}\cdot 11\text{H}_2\text{O}$ ($=\text{C}_2\text{O}_5\text{H}_5\text{Ir}_2\text{O}_{15}$; orthorhombic, Pnma ; $a = 17.43(2)$, $b = 17.93(2)$, $c = 10.52(1)$ Å; $Z = 4$; $R_w = 0.0317$) were carried out. Complexes $[\text{Cp}^*\text{Rh}(\text{bpy})\text{Cl}]\text{ClO}_4$ and $[\text{Cp}^*\text{Ir}(\text{bpy})\text{Cl}]\text{ClO}_4$ are isostructural. The dinuclear triply OH-bridged complex $[\text{Cp}^*\text{Ir}(\text{OH})_3\text{IrCp}^*]\text{OH}\cdot 11\text{H}_2\text{O}$ is isostructural with $[\text{Cp}^*\text{Rh}(\text{OH})_3\text{RhCp}^*]\text{OH}\cdot 11\text{H}_2\text{O}$ (Nutton et al. J. Chemical Society, Dalton Trans. 1981, 1997) with the two Cp^* ligands being orientated in a coplanar fashion. The pK_a 's (298 K, $I = 0.5 \text{ M}$ (NaClO_4)) of the coordinated water in the mono-aqua species $[\text{Cp}^*\text{M}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ were 8.4 (Co), 8.2 (Rh), and 7.5 (Ir). The coordinated water in the species $[\text{L}_2\text{-4Ru}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ is slightly more acidic ($\text{pK}_a = 6.9$ (L_2), 7.2 (L_3), 7.3 (L_4)). The vis absorption characteristics of the complex cations $[\text{Cp}^*\text{M}(\text{bpy})\text{X}]^{2+}$ ($\text{M} = \text{Co}, \text{Rh}, \text{Ir}$) and $[\text{L}_2\text{-4Ru}(\text{bpy})\text{X}]^{2+}$ are reported for $\text{X} = \text{H}_2\text{O}, \text{SCN}, \text{I}, \text{Br}, \text{N}_3$, thiourea, N-methylimidazole. Stopped-flow spectrophotometry was used to study the anation kinetics of the species $[\text{Cp}^*\text{M}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ ($\text{M} = \text{Co}, \text{Rh}, \text{Ir}$) and $[\text{L}_2\text{-4Rh}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ in aqueous solution

at pH 4.8 for a variety of monodentate anionic and neutral ligands X at variable temperature. The kinetics follow a second-order rate law, $\text{rate} = k_X[\text{X}][\text{complex}]$. On the basis of the Eigen-Wilkins mechanism, the second-order rate consts. k_X were corrected for outer-sphere complex formation to obtain the rate consts. for the interchange step, k_i , according to $k_i = k_X/K_{\text{os}}$ (K_{os} was calculated). Rate consts. k_i are nearly independent of the nature of the entering ligand X. The data for $k_i(\text{average})$ (=mean of k_i for all of the nucleophiles X studied) thus obtained range from $k_i(\text{average}) = 0.068 \pm 0.038 \text{ s}^{-1}$ for $[\text{L}_2\text{Ru}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ to $k_i(\text{average}) = 1590 \pm 760 \text{ s}^{-1}$ for $[\text{Cp}^*\text{Rh}(\text{bpy})(\text{H}_2\text{O})]^{2+}$. For the homologous series $[\text{Cp}^*\text{M}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ ($\text{M} = \text{Co}, \text{Rh}, \text{Ir}$) the order for $k_i(\text{average})$ (s^{-1}) is $\text{Co}:\text{Rh}:\text{Ir} = 0.60:1590:219$ at 293 K. The data obtained for $k_i(\text{average})$ can be taken as a good approximation

for

the rate of water exchange; i.e., $k_i(\text{average}) = k_{\text{ex}}$. 170-NMR techniques were used to study the water exchange in $[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})_3]^{2+}$ and $[\text{Cp}^*\text{Ir}(\text{H}_2\text{O})_3]^{2+}$ at variable temperature and pressure. The kinetic data for $k_{\text{ex}}^{298} \text{ (s}^{-1}\text{)}$, $\Delta H_{\text{thermod.}}$ (kJ mol^{-1}), $\Delta S_{\text{thermod.}}$ ($\text{J K}^{-1} \text{ mol}^{-1}$), and $\Delta V_{\text{thermod.}}$ ($\text{cm}^3 \text{ mol}^{-1}$) are 1.6 ± 105 , 65.6 , $+75.3$, and $+0.6$ for $[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})_3]^{2+}$ and 2.53 ± 104 , 54.9 , $+23.6$, and $+2.4$ for $[\text{Cp}^*\text{Ir}(\text{H}_2\text{O})_3]^{2+}$. The ratio $k_{\text{ex}}(\text{Rh})/k_{\text{ex}}(\text{Ir})$ for the species $[\text{Cp}^*\text{M}(\text{H}_2\text{O})_3]^{2+}$ is very close to the ratio $k_i(\text{average})(\text{Rh})/k_i(\text{average})(\text{Ir})$ for the species $[\text{Cp}^*\text{M}(\text{bpy})(\text{H}_2\text{O})]^{2+}$. The kinetic findings support the operation of an (dissociative) interchange mechanism (I(d)) for the anation of the species $[\text{LM}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ ($\text{M} = \text{Co}, \text{Rh}, \text{Ir}$; $\text{L} = \text{L}_1\text{-L}_4$) as well as for the water exchange in $[\text{Cp}^*\text{M}(\text{H}_2\text{O})_3]^{2+}$ ($\text{M} = \text{Rh}, \text{Ir}$). The rate-enhancing effect of π -arene ligands L on the water exchange in the half-sandwich cations $[\text{LM}(\text{H}_2\text{O})_3]^{2+}$ and $[\text{LM}(\text{bpy})(\text{H}_2\text{O})]^{2+}$ is discussed.

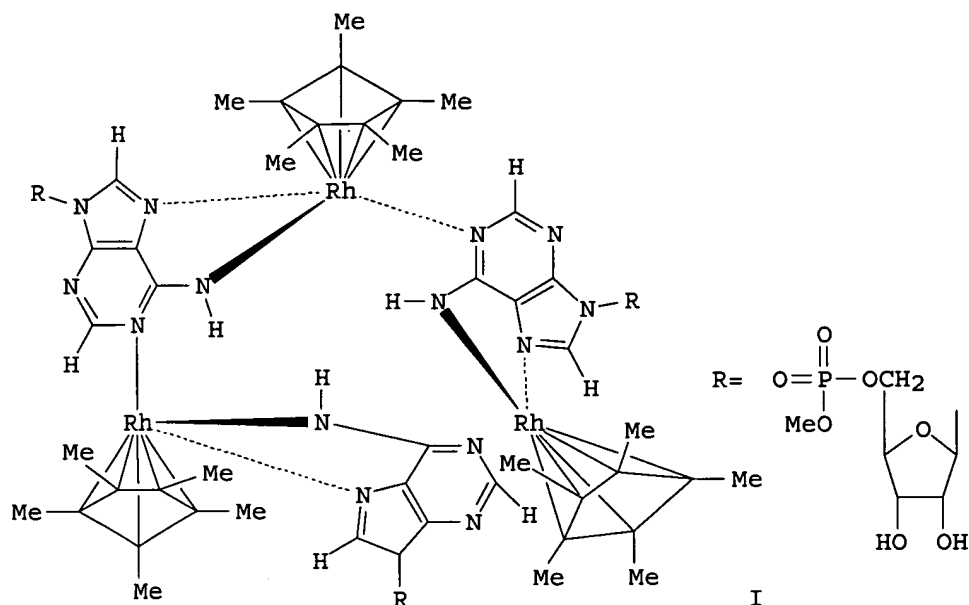
L4 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:626320 CAPLUS

DN 119:226320

TI Bioorganometallic chemistry. 3. Role of the phosphate group during reactions of adenosine monophosphate derivatives with an ($\eta^5\text{-pentamethylcyclopentadienyl}$)rhodium aqua complex in the diastereoselective formation of cyclic trimers, $[\text{Cp}^*\text{Rh}(\text{AMP})]_3$

AU Smith, David P.; Kohen, Elizabeth; Maestre, Marcos F.; Fish, Richard H.
 CS Lawrence Berkeley Lab., Univ. California, Berkeley, CA, 94720, USA
 SO Inorganic Chemistry (1993), 32(19), 4119-22
 CODEN: INOCAJ; ISSN: 0020-1669
 DT Journal
 LA English
 GI



AB The reactions of 5'-AMP in water (pH 5-8) with a (η^5 -pentamethylcyclopentadienyl)rhodium aqua complex, $[\text{Cp}^*\text{Rh}(\text{H}_2\text{O})_2(\text{OTf})_2] \times$ (1), showed, by ^1H and ^{31}P NMR spectroscopy, that the 5'-P(O)₂O group significantly inhibited cyclic trimer formation, $[\text{Cp}^*\text{Rh}[\mu\text{-}\eta^1(\text{N}1):\eta^2(\text{N}6,\text{N}7)\text{-5'-AMP}]]_3$, via competition with N1 and NH6 for the Cp^*Rh site and, as well, provided other mononuclear and dinuclear $\text{Cp}^*\text{Rh-O-P}$ complexes. In contrast, both the phosphate Me ester of 5'-AMP and 3'-AMP formed the cyclic trimer structures $[\text{Cp}^*\text{Rh}[\mu\text{-}\eta^1(\text{N}1):\eta^2(\text{N}6,\text{N}7)\text{-methyl-5'-/3'-AMP}]]_3$ (e.g., I for 5'-AMP Me ester). The consequence of steric effects, as demonstrated by the position and substitution of the phosphate group attached to the ribose, on the diastereoselectivity of cyclic trimer formation, as observed by ^1H and ^{31}P NMR spectroscopy and CD anal. over time, shows that the phosphate Me ester of 5'-AMP provides a greater diastereoselectivity (6:1) after 1 wk of equilibration compared to 5'-AMP (1.5:1) and 3'-AMP (1.2:1).

L4 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:213274 CAPLUS

DN 118:213274

TI Bioorganometallic chemistry. 2. Synthesis and structural studies of the reactions of a nucleobase 1-methylcytosine with a (η^5 -pentamethylcyclopentadienyl)rhodium aqua complex

AU Smith, David P.; Olmstead, Marilyn M.; Noll, Bruce C.; Maestre, Marcos F.; Fish, Richard H.

CS Lawrence Berkeley Lab., Univ. California, Berkeley, CA, 94720, USA

SO Organometallics (1993), 12(3), 593-6

CODEN: ORGND7; ISSN: 0276-7333

DT Journal

LA English
 AB The reactions of a nucleobase, 1-methylcytosine (MC), with a Cp*Rh (Cp* = η^5 -pentamethylcyclopentadienyl) aqua complex, $[(\eta^5\text{-Cp}^*)\text{Rh}(\text{H}_2\text{O})_2(\text{OTf})_2] \times 2$ (Tf = CF₃SO₂), provided two different complexes depending on the solvent media. Complex 3, $[(\eta^5\text{-Cp}^*)\text{Rh}(\eta^1(\text{N}_3)\text{-MC})(\eta^2(\text{O}_2, \text{N}_3)\text{-MC})](\text{OTf})_2$, was formed when acetone was used as the solvent; however, when complex 3 was recrystd. from water (pH 5.1) or when water was used as the reaction solvent, complex 4, trans- $[(\eta^5\text{-Cp}^*)\text{Rh}(\eta^1(\text{N}_3)\text{-MC})(\mu\text{-OH})]_2(\text{OTf})_2$, was isolated as a crystalline solid. The structures of 3 and 4 were verified by ¹H NMR, FAB/MS, elemental anal., and single-crystal x-ray anal. The structure of complex 3 showed one MC ligand bound via N3 and the other chelated via N3 and C:O2. Inspection of several bond lengths of complex 4 indicates extensive intramol. hydrogen bonding of the $\mu\text{-OH}$ groups with the exocyclic NH₂ and the 2-C:O group.

L4 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1991:207457 CAPLUS
 DN 114:207457
 TI Preparation and redox behavior of a series of mixed ligand Cp*/aqua/tripod complexes of cobalt, rhodium and ruthenium
 AU Koelle, Ulrich; Klauui, Wolfgang
 CS Inst. Anorg. Chem., Tech. Hochsch. Aachen, Aachen, D-5100, Germany
 SO Zeitschrift fuer Naturforschung, B: Chemical Sciences (1991), 46(1), 75-83
 CODEN: ZNBSEN; ISSN: 0932-0776
 DT Journal
 LA German
 AB $[\text{MLL}'\text{L}']_n$ [M = Co, Rh, Ru; L, L' = $\eta^5\text{-C}_5\text{Me}_5$, $\eta^5\text{-C}_5\text{Me}_5$; L, L' = $\eta^5\text{-C}_5\text{Me}_5$, H₂O; L, L' = $\eta^5\text{-C}_5\text{Me}_5$, tripod $[\text{CpCo}[\text{P}(\text{O})(\text{OEt})_2]_3]$; L, L' = tripod, tripod] were prepared Redox transitions of the complexes were investigated by cyclic voltammetry. The results are discussed in terms of ligand field and ligand charge stabilization of electron configurations.

=> s rhodium and diene and aquo
 71441 RHODIUM
 68987 DIENE
 4146 AQUO
 L5 1 RHODIUM AND DIENE AND AQUO

=> d bib abs

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 2005:216735 CAPLUS
 DN 142:267484
 TI Diene-bis-aquo-rhodium(I) complexes, process for preparing them and their use
 IN Rivas-Nass, Andreas; Peter, Gerhard; Widmer, Juergen
 PA Umicore AG & Co. KG, Germany; Briel, Oliver; Karch, Ralf
 SO PCT Int. Appl., 15 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005021153	A2	20050310	WO 2004-EP8964	20040810
	WO 2005021153	A3	20050512		
	WO 2005021153	B1	20050707		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,			

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
 TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
 AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
 SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
 SN, TD, TG

DE 10339790	A1	20050317	DE 2003-10339790	20030828
CA 2536197	A1	20050310	CA 2004-2536197	20040810
EP 1660233	A2	20060531	EP 2004-763974	20040810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1871067	A	20061129	CN 2004-80024756	20040810
JP 2007504104	T	20070301	JP 2006-524271	20040810
PRAI DE 2003-10339790	A	20030828		
WO 2004-EP8964	W	20040810		

OS MARPAT 142:267484

AB Diene-bis-aquo-rhodium(I) complex of the
 general formula $[\text{Rh}(\text{diene})(\text{H}_2\text{O})_2]\text{X}$ where diene is a
 cyclic diene and X is a noncoordinating anion is prepd, with
 applications in catalysis.

=> s rhodium and cod and aquo

71441 RHODIUM

47758 COD

4146 AQUO

L6 0 RHODIUM AND COD AND AQUO

=> s rhodium and cod and water

71441 RHODIUM

47758 COD

2512527 WATER

L7 122 RHODIUM AND COD AND WATER

=> s l7 and "bis-aquo"

490391 "BIS"

4146 "AQUO"

36 "BIS-AQUO"

("BIS"(W)"AQUO")

L8 0 L7 AND "BIS-AQUO"

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FILE LAST UPDATED: 28 Mar 2007 (20070328/ED)

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=> s cyclic diene

317323 CYCLIC

68987 DIENE

L1 289 CYCLIC DIENE

(CYCLIC(W)DIENE)

=> s l1 and rhodium

71441 RHODIUM

L2 8 L1 AND RHODIUM

=> d 1-8 bib abs

L2 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1181513 CAPLUS

DN 146:122115

TI Tris(pyrazolyl)borate carbosilane dendrimers and metallodendrimers

AU Camerano, Jose A.; Casado, Miguel A.; Ciriano, Miguel A.; Oro, Luis A.

CS Departamento de Quimica Inorganica, Instituto de Ciencia de Mteriales de Aragon, C.S.I.C.-Universidad de Zaragoza, Zaragoza, E-50009, Spain

SO Dalton Transactions (2006), (44), 5287-5293

CODEN: DTARAF; ISSN: 1477-9226

PB Royal Society of Chemistry

DT Journal

LA English

AB Carbosilane-core tris-pyrazolylborate dendrimers and their rhodium and ruthenium alkene complexes were prepared by hydrosilylation of allylsilanes with dendritic hydrosilanes followed by dendritic hydrosilylation of potassium allyltris(isopropoxy)borate; the ligand dendrimers were then complexed with Rh and/or Ir precursors. Reaction of triisopropylborate with allylmagnesium bromide and further treatment with benzoyl chloride gave $\text{CH}_2\text{:CHCH}_2\text{B(OiPr)}_2$ (1), which was then reacted with potassium pyrazolate and pyrazole to give the compound $\text{K}[\text{CH}_2 = \text{CHCH}_2\text{Bpz}_3]$ (2). The new allyl-containing scorpionate anion of 2 acts as a bi- or tri-dentate ligand, as shown by the mononuclear complexes $[\text{CH}_2\text{:CHCH}_2\text{Bpz}_3\text{M}(\text{LL})]$ [M = Rh; 3 LL = nbd, 4 LL = tfb (tetrafluorobenzobarrelene), 5 LL = (CO)(PPh₃); M = Ir; 6 LL = cod], obtained from reactions of the chloride-bridged dinuclear complexes $[\text{M}(\mu\text{-Cl})(\text{LL})]_2$ with 2. Furthermore, the borate 1 represents a key material to achieve the attachment of tris(pyrazolyl)borate groups to the

peripheries of carbosilane dendrimers. Thus, the platinum-catalyzed hydrosilylation reactions of compound 1 with the dendritic cores $\text{Si}[(\text{CH}_2)_3\text{SiMe}_2\text{H}]_4$ (G(0)-(SiH)4), (G(1)-(SiH)8), and (G(2)-(SiH)16) gave the corresponding borate-containing dendrimers $\text{Si}[(\text{CH}_2)_3\text{SiMe}_2(\text{CH}_2)_3\text{B}(\text{OiPr})_2]_4$ (G(0)-B4), $\text{Si}[(\text{CH}_2)_3\text{SiMe}\{(\text{CH}_2)_3\text{SiMe}_2(\text{CH}_2)_3\text{B}(\text{OiPr})_2\}]_4$ (G(1)-B8), and $\text{Si}[(\text{CH}_2)_3\text{SiMe}\{(\text{CH}_2)_3\text{SiMe}\{(\text{CH}_2)_3\text{SiMe}_2(\text{CH}_2)_3\text{B}(\text{OiPr})_2\}]_4$ (G(2)-B16) selectively in the anti-Markovnikov direction. Further reactions of G(0)-B4, G(1)-B8 and G(2)-B16 with potassium pyrazolate and pyrazole rendered the corresponding polyanionic dendrimers $\text{K}_4[\text{Si}\{(\text{CH}_2)_3\text{SiMe}_2(\text{CH}_2)_3\text{Bpz}_3\}]_4$ (G(0)-(Bpz3)4), G(1)-(Bpz3)8, and G(2)-(Bpz3)16, resp., which contain 4, 8, and 16 tris(pyrazolyl)borate groups sym. located around the dendritic peripheries. These unusual polyanionic dendrimers are excellent scaffolds to support metal centers, as shown by the reactions of G(0)-(Bpz3)4, G(1)-(Bpz3)8, and G(2)-(Bpz3)16 with $[\{\text{Rh}(\mu\text{-Cl})(\text{nbd})\}_2]$ to give the neutral rhodadendrimers $[\text{Si}\{(\text{CH}_2)_3\text{SiMe}_2(\text{CH}_2)_3\text{Bpz}_3\text{Rh}(\text{nbd})\}]_4$ G(0)-(Bpz3Rh)4, G(1)-(Bpz3Rh)8 and G(2)-(Bpz3Rh)16 as stable solids in excellent yields. Following this protocol, mixed rhodium/iridium metallodendrimers can be prepared

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:582102 CAPLUS
DN 143:193619
TI Cycloisomerization of Enynes via Rhodium Vinylidene-Mediated Catalysis
AU Kim, Hahn; Lee, Chulbom
CS Department of Chemistry, Princeton University, Princeton, NJ, 08544, USA
SO Journal of the American Chemical Society (2005), 127(29), 10180-10181
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 143:193619
AB A novel rhodium-catalyzed cycloisomerization has been developed which converts various acyclic enynes to their cyclic diene isomers with endo-selectivity. Both $[\text{RhCl}(\text{COD})]_2/\text{P}(\text{4-FC}_6\text{H}_4)_3$ and $\text{RhCl}(\text{PPh}_3)_3$ catalyst systems are effective in promoting the C-C bond-forming cyclization of enynes to furnish carbo- and heterocycles in good to excellent yield. Deuterium labeling studies suggest that the reaction proceeds through the formation of a rhodium vinylidene followed by subsequent [2 + 2] cycloaddn. with the alkene and ring-opening of the resulting rhodacyclobutane. These mechanistic studies reevaluate a previously proposed reaction pathway and lead to the discovery of a new cycloisomerization reaction that involves migration of silyl and selenyl substituents at the alkyne of enyne substrates upon cyclization.

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2005:216735 CAPLUS
DN 142:267484
TI Diene-bis-aquo-rhodium(I) complexes, process for preparing them and their use
IN Rivas-Nass, Andreas; Peter, Gerhard; Widmer, Juergen
PA Umicore AG & Co. KG, Germany; Briel, Oliver; Karch, Ralf
SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005021153	A2	20050310	WO 2004-EP8964	20040810

WO 2005021153 A3 20050512
WO 2005021153 B1 20050707

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

DE 10339790 A1 20050317 DE 2003-10339790 20030828
CA 2536197 A1 20050310 CA 2004-2536197 20040810
EP 1660233 A2 20060531 EP 2004-763974 20040810
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
CN 1871067 A 20061129 CN 2004-80024756 20040810
JP 2007504104 T 20070301 JP 2006-524271 20040810
PRAI DE 2003-10339790 A 20030828
WO 2004-EP8964 W 20040810

OS MARPAT 142:267484

AB Diene-bis-aquo-rhodium(I) complex of the general formula
[Rh(diene)(H₂O)₂]X where diene is a cyclic diene and X
is a noncoordinating anion is prep'd, with applications in catalysis.

L2 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:52124 CAPLUS

DN 132:180703

TI Asymmetric isomerisation of a cyclic diene: a
comparative study of BINAP and BIPNOR-rhodium(I) catalysts

AU Faitg, Thomas; Soulie, Josette; Lallemand, Jean-Yves; Mercier, Francois;
Mathey, Francois

CS Laboratoire de Synthèse Organique, UMR 7652 CNRS, DCSO, Ecole
Polytechnique, Palaiseau, 91128, Fr.

SO Tetrahedron (1999), Volume Date 2000, 56(1), 101-104
CODEN: TETRAB; ISSN: 0040-4020

PB Elsevier Science Ltd.

DT Journal

LA English

OS CASREACT 132:180703

AB The asym. isomerization of 5,7-dibenzyloxy-6-(trialkylsiloxy)cyclohepta-
1,3-diene to the corresponding 1,6-dibenzyloxy-7-
(trialkylsiloxy)cyclohepta-1,3-diene can be accomplished at 90° in
a 75/25 mixture of toluene and DME in the presence of a [Rh(BIPNOR)(cod)]⁺
catalyst with 92% ee. A much lower ee is observed with BINAP. In both
cases, the observed ee's increase with temperature. A mechanism involving an
η⁵-pentadienyl-Rh complex is proposed.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:307263 CAPLUS

DN 129:40979

TI Preparation of ethane derivatives by catalytic hydrogenation of olefins
using tertiary phosphine complexes

IN Tamao, Kohei; Saito, Seiki; Yamaguchi, Shigehiro; Yanagawa, Masao; Ota,
Yoshiaki

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10130175	A	19980519	JP 1996-290086	19961031
PRAI	JP 1996-290086		19961031		
OS	CASREACT 129:40979; MARPAT 129:40979				
AB	ACHR1CHR5R6 [A = COX [X = H, lower alkyl, OH, lower alkoxy, NR7R8 (R7, R8 = H, lower alkyl, or NR7R8 = cyclyl), NR9R110 (R9, R10 = H, lower alkyl, aryl, acyl)]; R4-R6 = H, CO2H, lower alkyl, lower cycloalkyl which may be substituted with lower alkoxy, OH, carboxy, alkoxy, alkylcarbonyl, amido, or halo, aryl which may be substituted with lower alkoxy, lower alkyl, OH, or halo] are prepared by treatment of ACR1:CR5R6 with H in the presence of [MYpZ]qXr [M = transition metal; X = anion, tertiary amine; Y = linear or cyclic diene compds.; Z = R1nR23-nSiOCH(CH2PR32)CH(CH2PR32)OSiR1nR33-n (R1-R3 = lower alkyl, lower cycloalkyl, Ph which may be substituted with halo, lower alkyl, lower alkoxy; n = 0-3); p = 0, 1; q, r = 1, 2]. Use of the catalysts provide high conversion and selectivity. A MeOH solution of phenylitaconic acid and Et3N was treated with a MeOH solution of [(1,5-cyclooctadiene) [(2R,3R)-2,3-bis(tert-butyl dimethylsiloxy)-1,4-bis(diphenylphosphino)butane] rhodium(I)] tetrafluoroborate (preparation given) at room temperature for 24 h to give 70% (S)-2-benzylsuccinic acid (9.7% e.e.).				

L2 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:773007 CAPLUS

DN 123:230862

TI Microwave-activated preparation of silicone foams, and compositions useful therein

IN Lewis, Larry N.; Schultz, William N.; Levinson, Lionel M.; Sumpter, Chris A.; Stein, Judith

PA General Electric Co., USA

SO U.S., 5 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5438081	A	19950801	US 1994-325913	19941020
PRAI	US 1994-325913		19941020		
AB	Silicone foams are prepared by microwave curing of a mixture of ≥ 1 siloxane having vinyl groups attached to Si; ≥ 1 H siloxane; a blowing agent comprising water and, preferably, ≥ 1 monohydroxy aliphatic compound, a cyclodextrin inclusion compound of a Pt group metal coordination complex (preferably with a cyclic diene) and a filler. The use of the inclusion compound as a catalyst increases the shelf life of the composition, whereupon curing and foaming occur together upon exposure to microwave radiation.				

L2 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1980:567591 CAPLUS

DN 93:167591

TI Rhodium hydroformylation catalyst

IN Zuech, Ernest A.

PA Phillips Petroleum Co., USA

SO U.S., 8 pp. Division of U.S. No. 3,956,177.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4195042	A	19800325	US 1976-663004	19760302
	US 3956177	A	19760511	US 1973-376519	19730705

PRAI US 1971-173689 A2 19710820
 US 1973-376519 A3 19730705
 AB Complexes of LnRhX_m ($X = \text{Cl, Br, I}$; $L = \text{cyclic diene or cyclic triene}$; $n = 1, 2$; $m = 1, 2$; $n + m = 2, 3$) treated with hydrazine or metal hydrides and phosphites or phosphines were used as hydroformylation catalysts. Thus, π -1,5,9-cyclododecatrienylrhodium(III) dichloride with Na hydride and tri-1-naphthyl phosphite in THF gave a complex which was used to hydroformylate 1-hexene to 77.5% hexanal.

L2 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
 AN 1976:437669 CAPLUS
 DN 85:37669
 TI Rhodium hydroformylation catalyst
 IN Zuech, Ernest A.
 PA Phillips Petroleum Co., USA
 SO U.S., 7 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 3956177	A	19760511	US 1973-376519	19730705
	US 4195042	A	19800325	US 1976-663004	19760302
PRAI	US 1971-173689	A2	19710820		
	US 1973-376519	A3	19730705		

AB A Rh hydroformylation catalyst for olefins was prepared from an organorhodium halide containing a cyclic diene or triene group, hydrazine or a metal hydride, and a P-containing adjuvant. The catalyst was used for hydroformylation of 1-hexene to n-heptaldehyde, and propene to n-butyraldehyde. The catalytic Rh compound used in examples was π -cyclododeca-1,5,9-trienylrhodium(III) dichloride. The hydrides and hydrazine compound were NaH, Na borohydride, and hydrazine. The P compns. were tri- α -naphthyl phosphite and triphenyl phosphite.